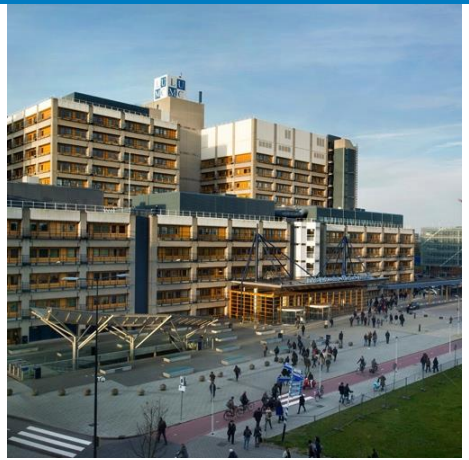
Leiden University Medical Center

Eurotransplant Reference Laboratory

Report from the Eurotransplant Tissue Typers Advisory Committee

Virtual TTAC meeting September 17, 2020



Sebastiaan Heidt

Eurotransplant Reference Laboratory

VIRTUAL EXTRAMURAL MEETING 2020

TTAC - Members present

- Marie-Paul Emonds (Belgium)
- Gottfried Fischer (Austria)
- Nils Lachmann (Germany)
- Blanka Vidan-Jeras (Slovenia)
- Aniko Zsilvasi (Hungary)
- Bouke Hepkema (the Netherlands)
- Renata Zunec (Croatia)

- Jan de Boer (ET)
- Ineke Tieken (ET)
- Serge Vogelaar (ET)

- Frans Claas (ETRL – secretary, rotating off)
- Sebastiaan Heidt (ETRL – chairman)

- Excused: Teresa Kauke (Germany)

Main topics discussed: vPRA and current German guidelines

The vPRA is in line with the upcoming German guidelines but not completely with the current guidelines.

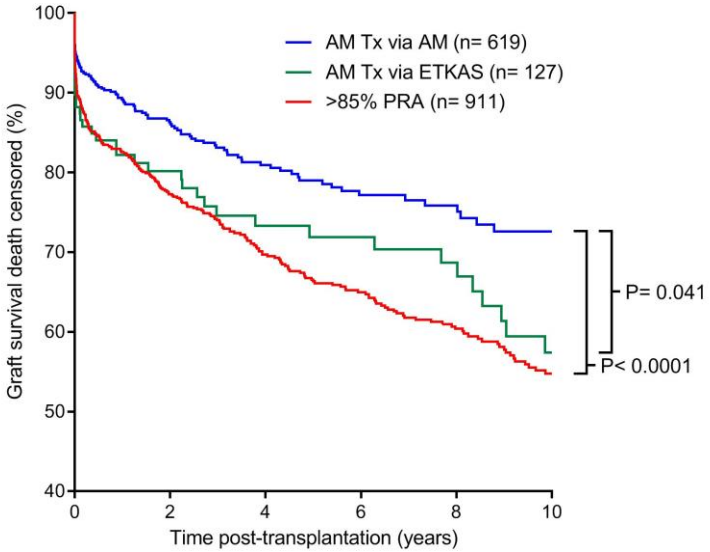
An interpretation on the current guidelines to facilitate the vPRA has been drafted and discussed with the BÄK and will be further decided on.

- Ship sera of vPRA<5% is not in conflict with the current guidelines
- No shipment of sera of patients with vPRA>0% based on non-cytotoxic antibodies by using the appropriate tick box in ENIS

Main topics discussed: AM program 2.0

R-TTAC01.20 Acceptable antigens within AM program

Currently, only acceptable HLA-A, -B and -DR antigens are used for allocation to AM patients



APPROVED

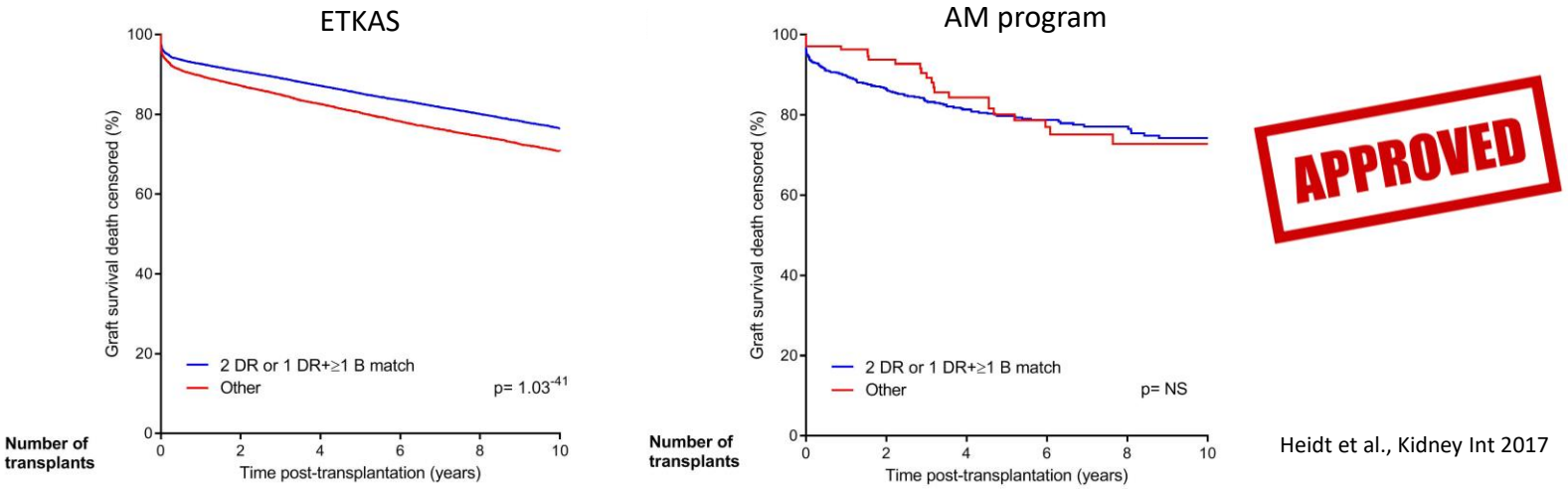
Heidt et al., Kidney Int 2017

The AM program allocation will be based on HLA-A, -B, -C, -DR and -DQ (ET match determinant level)

Main topics discussed: AM program 2.0

P-TTAC03.20 Minimal Match Criteria (MMC) within AM program

- MMC of 2 HLA-DR or 1 HLA-DR + 1 HLA-B (split) is adhered to. For patients with AM chance <0.1%, as well as status HU, MMC are reduced to 1 HLA-DR broad antigen



Heidt et al., Kidney Int 2017

- Minimal Match Criteria (MMC) for all AM patients will be one HLA-DR on the broad antigen level

Main topics discussed: AM program 2.0

R-TTAC02.20 Inclusion criteria AM program

Three issues:

- Patients with a relatively ‘high’ chance are transplanted through the AM program within weeks
- Once included in the AM program, a patient remains in the AM program for life
- In some ET countries, there is a huge difference in ETKAS waiting time and AM waiting time

Main topics discussed: AM program 2.0

R-TTAC02.20 Inclusion criteria AM program – chance on an organ offer

- Blood group O and A:
  - ETKAS chance <2%, based on unacceptables and blood group identity: eligible for AM program

Donor	Recipient
0	0
A	A
B	B
AB	AB

- Blood group B and AB:
  - ETKAS chance <2% based on unacceptables and blood group identity: blood group modified compatible within ETKAS
  - ETKAS chance <2% based on unacceptables and blood group modified compatibility: eligible for the AM program

Donor	Recipient
0	0, B
A	A, AB
B	B
AB	AB

- Unacceptable antigens for AM status remain under the same conditions and will be evaluated per patient by the ETRL

Main topics discussed: AM program 2.0

R-TTAC02.20 Inclusion criteria AM program – waiting time

- For adult patients: the mean waiting time of adult patients in the same country
- For pediatric patients: the mean waiting time of pediatric patients in the same country

- Re-registration onto the waiting list after a failed transplant: same criteria are valid taken returned waiting time into account
- If the chance on an organ offer within ETKAS is <0.01% the waiting time criterium will be omitted

- Mean waiting time will be recalculated annually

Response ETKAC: more data on mean and medium waiting time required before approval

Main topics discussed: Extended HLA typing

For the introduction of the virtual crossmatch, extended HLA typing is required. We are in a transition stage where high-resolution typing during deceased donor procedures is not yet feasible.

The TTAC has approved a new HLA table which includes:

- HLA-A, -B, -C, -DRB1, -DQB1, -DQA1, -DPB1, -DPA1
- Second field resolution
- All European CWD alleles (Sanches-Mazas, HLA 2017)
- Translation to match determinants for HLA-A, -B, -C, -DRB1, -DQB1
- Possibility to enter epitopes for HLA-DPB1

The new HLA tables have been published on www.etrl.eurotransplant.org

- How to communicate HLA data to Eurotransplant in the future? Two options:

Extended HLA typing – option 1

Reporting the most likely HLA alleles at the second field level in a worksheet (not a report as defined by EFI), with the acknowledgement that ambiguities may exist

How will these data be used?

- Exclude donors for sensitized patients who have unacceptable antigens listed that are present on the donor (at second field level)
- Translation to ET Match determinants for matching purposes at the ET office, based on new HLA table

Benefit:

- Practical solution, relatively easy to program
- HLA labs use their knowledge to interpret intermediate level HLA typing

Downside:

- Data communication of second field typing for all loci could be error-prone
- How to design an EPT for this intermediate typing
- Not according to current EFI standards

Extended HLA typing – option 2

Reporting all ambiguities, for example as P-groups or as a GL-string

How will these data be used?

- Exclude donors for sensitized patients who have unacceptable antigens within the list of ambiguities
- Translation to ET Match determinants for matching purposes at the HLA laboratory, based on new HLA table

Benefit:

- The actual data as determined in the HLA typing assay is communicated
- Data communication could be made future-proof
- Likely easier to design an EPT scheme for and possibly easier to adhere to EFI standards

Downside:

- Data interpretation must be fully automated within Eurotransplant office, more difficult to program
- More programming required in some national systems
- Less interpretation by the HLA laboratory